University of Applied Sciences Nordhausen

Study Regulations
for the Technical-Scientific Master Courses at the University of Applied Sciences Nordhausen

Reading Version in English language

The official version is published in German language in
The Official Announcements of the HS Nordhausen,
Edition 18/2018

Pursuant to Section 3 (1) in conjunction with Section 37 (1) No. 2 of the Thuringian Higher Education Act (ThürHG) of 10 May 2018 (GVBl. p. 149), as last amended by Article 27 of the Act of 6 June 2018 (GVBl. p. 229), and Section 9 (1) of the German Higher Education Act (GVBl. p. 229). No. 10 of the Basic Regulations of the University of Applied Sciences Nordhausen (Official Gazette of the Thuringian Ministry of Education No. 12/2007, p. 299) as amended by the First Regulations (amending the Basic Regulations of the University of Applied Sciences Nordhausen of 24 April 2013 (Official Gazette of the Thuringian Ministry of Education, Science and Culture No. 4/2013, p. 299). 143) the Nordhausen University of Applied Sciences shall issue the following study regulations for the technical-scientific master courses at the Nordhausen University of Applied Sciences on the basis of the examination regulations for the master courses with 90 ECTS credits in the Engineering Faculty of the Nordhausen University of Applied Sciences approved by the President on 12 July 2013. The Faculty Council for Engineering Sciences adopted the study regulations on 10 October 2018. The study regulations were approved by the President on 21 November 2018.

§ 1
Scope of the study regulations

These study regulations regulate the objectives, contents and structure of the technical and scientific master's courses at the University of Applied Sciences Nordhausen.

§ 2
Goal of study, qualification profile, degree

(1) The technical-scientific Master's courses provide the students with a scientifically oriented basic education. Students are taught the necessary scientific knowledge, skills and methods, taking into account the requirements and changes in the professional world, so that they can apply them independently and responsibly and classify them critically.

(2) The Master's examination is the scientifically and professionally qualifying degree of the study programme. The aim of the Master's examination is to determine whether the students have acquired the specialist knowledge necessary for scientific and professional work and have the ability to work independently on problems on the basis of scientific findings and methods. With this conclusion, the qualification for a further scientific activity that can lead to a doctorate is given.

After passing the Master's examination, the Hochschule Nordhausen awards the degree "Master of Engineering", abbreviated to "M.Eng.".

§ 3
Admission requirements

(1) The general admission requirements are laid down in the Admission Regulations of the University of Applied Sciences Nordhausen.

(2) Prerequisites for admission to the program are also:

1. proof of completion of a suitable course of study as a Bachelor of Engineering or Bachelor of Science with a total of 210 credit points (CP) in accordance with the "European Credit Transfer and Accumulation System" - European System for the Recognition, Transfer and Accumulation of Study Achievements (ECTS) or as a Diplom-Engineer at a university of applied sciences or university with a scope of 240 CP

   or

2. proof of a suitable Bachelor of Engineering or Bachelor of Science degree with 180 Credit Points (CP) according to the "European Credit Transfer and Accumulation System" (ECTS).

In deviation from § 4 (1), the enrolment of the students mentioned under point 2 can already take place in the winter semester, in connection with the requirement to provide a qualification of 30 CP. The qualification can be achieved via:

a) an industrial internship of at least 18 weeks qualifying as an engineer-scientist. The contents of the internship shall be described in an internship report and shall be defended in a colloquium. The credit points to be achieved with this qualification build-up are broken down as follows:

Internship 18 CP
Internship Report 9 CP
Colloquium 3 CP .

The colloquium must be completed by the beginning of the first semester;

or

b) a qualifying engineer-scientific professional activity with a minimum duration of 6 months. The contents of the work shall be described in a work report which shall be defended in a colloquium. The credit points to be achieved with this qualification are broken down as follows:

Professional activity 24 CP
Work report 6 CP.

(3) To be admitted to a technical-scientific master's programme at Nordhausen University of Applied Sciences, a qualified degree is required.
A qualified degree is awarded if the applicant is one of the best 35% of the graduates in his or her programme. If an ECTS grading table according to the ECTS Users' Guide is used, it will be interpolated linearly to determine the intermediate grade up to which the student is to be assumed to belong to the best 35% of the graduates of the course, assuming equal distribution of the intermediate grades within a grade class.
A qualified degree is given if the overall grade is 2.5 or better; if the overall grade is not based on the grading system applicable to the Master's programme at Nordhausen University of Applied Sciences in accordance with the examination regulations, the overall grade is converted into this grading system.
If proof of the degree is not possible by the end of the application period, admission may be granted on condition that proof of the degree is furnished within a period to be determined by the Dean of Studies.

(4) For students of a German-language degree programme whose native language is a language other than German and who have not completed their higher education entrance qualification or their first degree in German, proof of sufficient knowledge of German is a DSH-2 certificate (Deutsche Sprachprüfung für den Hochschulzugang ausländischer Studienbewerber - German Language Examination for Admission of Foreign Students) or Level 4 in each skill in the test "Deutsch als Fremdsprache" (TestDAF), the passed examination part "Deutsch" in the context of the Feststellungsprüfung an Studienkollegs or a German Language Diploma (Level II) of the Kultusministerkonferenz (DSD II), further admission requirements.

(5) Students of an English-language degree programme whose mother tongue is a language other than English and who have not completed their higher education entrance qualification or their first degree in English are required to prove sufficient knowledge of English at level B2 of the Common European Framework of Reference for Languages.

(6) Suitable studies in the sense of paragraph 2.1 or 2.2 are considered to be the degrees listed in the programme-specific annexes. In the case of qualifications not listed, the board of examiners decides on suitability. The examining Board shall decide whether the other requirements set out in paragraphs 2 to 5 have been met.

§ 4
Start and duration of studies

(1) As a rule, studies begin with the summer semester. Courses are usually offered on an annual basis. Students who change their place of study and students with a prerequisite according to § 3

paragraph 2 number 2 can also enroll in the winter semester.

(2) The standard period of study, including all examinations, is three semesters, or four semesters if the prerequisite for admission according to § 3 Para. 2 No. 2 is fulfilled.

§ 5
Scope of studies and weighting of examination performance

(1) The study volume in the first two semesters amounts to a total of 60 CP. In addition, there is the Master's thesis with 26 CP and its defense with 4 CP.

(2) For the successful completion of the study 90 CP must be compiled according to the ECTS.

(3) The examination performances to be performed are weighted in the calculation of the grade of the Master's examination according to their share in the total number of 90 CP.

§ 6
Structure, content and procedure of the studies

(1) The course has a modular structure. Modules can consist of several study units, which are thematically and temporally coordinated. Further details can be found in the study plan (see annexes).

(2) The modules differ between mandatory and optional modules. The compulsory elective modules approved for the course of study are announced by a notice before the beginning of the semester.

(3) The Master's thesis is a scientifically demanding work to be completed in the last semester of study. The processing time is usually five months.

(4) The prerequisites for admission to the Master's thesis and the Master's Colloquium are regulated in the examination regulations for the Master's programmes with 90 ECTS credits in the Engineering Faculty.

§ 7
Types of events, forms of teaching and learning, proof of attendance

(1) The following forms of teaching and learning can be considered during the course of study:
- Lecture (V);
- Exercise (Ü)
- Seminar (S)
- Internship (P)
- Project work (Pr).

a. Lecture:
It serves the coherent presentation of a subject matter and the deepening of facts and methods.

b. Practice:
Teaching materials and contexts are systematically worked through and applied to practical cases. Under guidance, students work individually or in groups on solutions to given problems.

c. Seminar:
Here the development of special expertise and facts as well as the processing of complex problems takes place in alternation of lecture, presentation and discussion.

d. Internship:
It serves to acquire, supplement and deepen knowledge and finished products by working on practical experimental tasks.

e. Project work:
Here, a larger task is processed by a group or an individual. The processing takes place in the form of a laboratory, programming or homework under regular control by the teacher or lecturer. If the task is carried out externally, i.e. in an institute or a company, an agreement must first be reached between the institution and the teacher or lecturer on the assignment and the scope of work.

(2) The types of events are determined by the module manager and are anchored in the module manual. They are coordinated in terms of content and timing and are designed in such a way that students learn to work independently and scientifically as early as possible. In addition to imparting specialist competence, the courses promote responsible scientific and practice-oriented attitudes and behaviour.

(3) In special cases, the courses can also be offered as block courses.

(4) If the examination regulations for the Master's programmes with 90 ECTS credits in the field of Engineering provide for proof of attendance, the lecturer responsible for the course will determine the conditions for its issue.

(5) As an integral part of the course of study, academic self-study plays a particularly important role in all phases of education in promoting critical, methodical and creative thinking and the ability to work independently on complex tasks. In the subject counselling (cf. § 9 Para. 2) problems of self-study are also discussed with the students. The content and scope of the courses are designed in such a way that they can be prepared and followed up by the students.

§ 8
Study plan, module manual

(1) On the basis of these study regulations, study plans are drawn up for the individual study programmes and attached as annexes. They guarantee the proper structure of the studies and contain:

- the modules,
- the choice options via the mandatory selection modules,
- the number of semester hours per week per course,
- the type of event (V, Ü, S, P, Pr),
- the ECTS credits (CP) awarded for the modules.

(2) The description of the contents of the courses/test areas can be found in the module handbook of the Master's programmes of the Department of Engineering at the University of Applied Sciences Nordhausen.

§ 9
Student counselling

(1) Student counselling is provided by the general student counselling service of the Nordhausen University of Applied Sciences. It covers questions of study suitability and, in particular, information on study opportunities, study contents, study structure and study requirements. It also

includes psychosocial counselling in the event of personal difficulties caused by the student's studies.

(2) The department is responsible for advising students on their studies. It supports students especially in questions of study design and study techniques.

(3) The use of study counselling is particularly recommended in the following cases:

- at the beginning of studies,
- in the planning and organisation of studies,
- if you have difficulties during your studies,
- before and after a longer interruption of studies,
- in the event of failure to pass examinations,
- before a planned termination of studies.

§ 10
Regulations for students with childcare and care responsibilities, disability or chronic illness

The specific needs of students with childcare and care responsibilities as well as of students with disabilities or chronic illnesses will be adequately taken into account in the design of the course of studies and in the provision of evidence of achievement.

§ 11
Coming into effect and publication

(1) These study regulations come into effect on the day following their publication in the official announcements of the Nordhausen University of Applied Sciences.

(2) These study regulations apply to students who are enrolled for the first time in a technical/scientific Master's programme from the winter semester 2018/19 onwards.

Nordhausen, 21 November 2018

Prof. Dr. Jörg Wagner
President
University of Applied Sciences Nordhausen

Prof. Dr. Frank-Michael Dittes
Dean
University of Applied Sciences Nordhausen
Department of Engineering Sciences

Appendix: Renewable Energy Systems course of studies

One of the major challenges of the 21st century is to ensure a secure and environmentally sound energy supply in the face of increasing global energy demand, dwindling fossil resources and progressive climate change. Increased use of renewable energy sources is a way of meeting these challenges.

This requires engineers with global qualifications who have a broad knowledge of the energy industry, business administration, social and political framework conditions and renewable energy systems.

The study course Renewable Energy Systems at the University of Applied Sciences Nordhausen is intended to enable students to pursue a profession as Master of Engineering. Its graduates can use scientific methods to analyse energy problems, develop technological and business solutions and make appropriate decisions.

The programme is aimed at German and foreign students with good English language skills. The modules of the program are held in English (with the exception of the module "German as a Foreign Language"). If the Bachelor's degree was not obtained at an English-speaking university, the applicant must prove at least language level B2 according to the Common European Framework of Reference for Languages. Proof is provided by the certificate of higher education entrance qualification or TOEFL, IELTS, TELC as well as comparable certificates.

Qualifications suitable for admission to the Renewable Energy Systems degree programme

- mechanical engineering
- electrical engineering
- industrial engineering
- power engineering
- regenerative energy technology

Study plan Renewable Energy Systems (M.Eng.)

Mandatory area

1st semester (Spring Semester)	SWS V/Ü/Pr	CP	PA	2nd semester (Autumn Semester)	SWS V/Ü/Pr	CP	PA
Bioenergy Systems I (854)	4/0/0	5	PL	Bioenergy Systems II (855) Biogas and Liquid biofuels	4/0/0	5	PL
Photovoltaic Systems (852)	4/0/0	5	PL	Solar Thermal Lab (859)	2/0/2	5	PL
Wind Power Plants (851)	3/0/1	5	PL	Lifecycle Analysis of renewable energy Systems (856)	4/0/0	5	PL
1st Scientific Project (857)	0/0/4	5	PL	2nd Scientific Project (858)	0/0/8	10	PL
German as a Foreign language (910)	0/0/4	5	PL	Obligatory Elective course	4	5	PL
Obligatory Elective course	4	5	PL				
subtotal	**24**	**30**			**24**	**30**	

3rd semester (Spring Semester)	CP
Master thesis (860A)	26
Presentation and Defense (860B)	4
sum	**30**

Explanation of the abbreviations:

SWS	Semester hours per week
CP	Credit points
V	Lecture
Ü	Exercise
Pr	Internship
PA	Test type
PL	Test performance

Elective Courses (exemplary list)

	SWS V/Ü/Pr	CP	PA
Renewable Energies in Rural Areas (862)	4/0/0	5	PL
Bioengineering (864)	4/0/0	5	PL
Climate Change (866)	4/0/0	5	PL
Ocean Energy and Hydropower (861)	4/0/0	5	PL
Numerical Methods in Heat and Mass Transfer	2/2/0	5	PL
Fuel Cell Technologies (863)	4/0/0	5	PL